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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,043

08/29/2006

Kazuyuki Sashida

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1609 7590 07/14/2009

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EXAMINER

FANG, SHANE

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

07/14/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,043	<b>Applicant(s)</b> SASHIDA ET AL.	
	<b>Examiner</b> SHANE FANG	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. Previous objection to claim 1 has been overcome by amendment.
2. Amendment of claim 4 concerning the wording has been found supported.
3. The examiner maintains the previous 10/103 rejections of claims 1-4.

### *Claim Rejections - 35 USC § 102/103*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

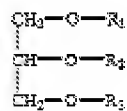
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Sashida et al. (US 6720374 B2)**.

Sashida et al. discloses a biodegradable plasticizer for providing aliphatic polyester, in particular, polylactic acid.

As to claims 1-2, Sashida et al. further discloses aliphatic polyester composition comprising an aliphatic polyester, polyglycerol acetic ester and 5-50 parts by weight of a compound (claim 12 and 13) having the following structure (claim 12 and 13):

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wherein one or two of  $\text{R}_1\text{-R}_3$  is an acyl group having 8-18 carbon atoms and the rest thereof are acetyl groups or hydrogen atoms. One of ordinary skill in the art would immediately envisage a species of  $\text{R}_1=\text{H}$ ,  $\text{R}_2=\text{R}_3=-(\text{CO})\text{C}_7\text{H}_{15}$ , a C8 acyl group, having a total carbon number of 16 of all acetyl groups.

Sashida et al. is silent on the average acylation rate. In view of the substantially identical composition, the adduct would possess the claimed acylation rate properties. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F. 2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980). See MPEP § 2112. In this particular case, it appears there is no difference between the structure in the reference and claimed invention, and structure (aforementioned species) disclosed by Sashida et al. is clearly capable of achieving claimed acylation rate.

As to claim 3, the reference discloses the plasticizer in claims 1 used for polylactic acid (Abstract)

As to claim 4, the reference discloses the aliphatic polyester composition recited in claims 1-2 to be used for making a film, a sheet, a bag by molding (Abstract).

### ***Response to Arguments***

7. Applicant's arguments have been fully considered but they are not persuasive.

The applicant has argued (Pg. 3) that Shishida et al. fails to disclose or suggest to one skilled in the art the combination of an aliphatic resin and a plasticizer comprising

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a glycerol fatty acid ester where (1) the acyl group has 2 to 18 carbon atoms, (2) the total of carbon atoms of the acyl groups is 10 to 22 and (3) the glycerol fatty acid ester has an average acylation rate of 50 to 90%.

The examiner disagrees. As shown in the above rejections, Sashida et al. discloses a species that reads on the claimed structure in claims 1-2, which would inherently results in the claimed acylation rate.

The applicant has argued (Pg. 3-4) that Shishida et al. disclosed a glycerol fatty acid ester that would allegedly corresponds to an acylation rate of 96.2%, away from the claimed range.

The examiner disagrees. Firstly, the aforementioned species is used for rejection, not the glycerol diacetomonoaurate in the reference and used by the applicant to rebut the rejection. Secondly, concerning the hydroxyl number more of 20 or more that would allegedly result in high acylation rate, the reference merely discloses the hydroxyl number to be preferably 20 or less (4: 26). This does not excludes hydroxy number to be more than 20 that would result in the claimed acylation rate range, based on applicant's rationale. Lastly, the examiner has found no support of obtaining acylation rate based on the hydroxy number of the material in the reference and the formula in instant specification [0057] for calculation of acylation rate. The examiner has found the acylation rate of 96.2% of glycerol diacetomonoaurate cannot be reached by using the said formula, which is uncertain about "mol average MW1". Note the reference is also silent on the acylation rate, its calculation method, and the determination method of hydroxy number. The determination method can be well-

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recognized method of GC, GPC, and IR, etc., different from the oil method used by the applicant. No equivalence of hydroxyl numbers from the reference and the instant specification can be found.

The applicant has argued and provided unexpected result due to the claimed acylation rate (Pg.5-6). The argument is not persuasive to overcome 102 rejections.

Therefore, the examiner maintains the 102/103 rejections of claims 1-4 over **Sashida et al. (US 6720374 B2)**.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANE FANG whose telephone number is (571)270-7378. The examiner can normally be reached on Mon.-Thurs. 8 a.m. to 6:30 p.m. EST..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sf

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796